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EXAMINER

YAO, KWANG BIN

| ART UNIT | PAPER NUMBER |
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2667

DATE MAILED: 06/10/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,954

Applicant(s)

SMITH ET AL.

Examiner

Kwang B. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7, 9-66 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 57-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Farris (US 6,064,653).

Farris discloses a communication system comprising the following features: depicted in Fig. 3, and described on column 10, line 47 to column 11, line 5; column 14, lines 45-52; column

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15, lines 51-63, regarding claim 57, receiving an indication of the quality of data transmission over a first type communication path (50); and transmitting a signal that causes an in-progress time sensitive communication to be switched back and forth between the first type communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); regarding claim 58, wherein the first type communication path (50) is an Internet network (50) and the second type communication path (10) is a circuit switched telephone network (10); regarding claim 59, receiving a signal that causes an in-progress time sensitive communication to be switched back and forth between the first type communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); and relaying the signal to a switch that causes an in progress time sensitive communication to be switched back and forth between the first type communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); regarding claim 60, wherein the first type communication path (50) is an Internet network (50) and the second type communication path (10) is a circuit switched telephone network (10). See Abstract, and column 6-14.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-7, 12-14, 18-44, 48-56, 61-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris (US 6,064,653) in view of Forslow (US 6,608,832).

Farris discloses a communication system comprising the following features: depicted in Fig. 3, and described on column 10, line 47 to column 11, line 5; column 14, lines 45-52; column 15, lines 51-63, regarding claim 1, evaluating whether the quality of data transmission over a first type communication path (50) is acceptable; and switching an in progress time sensitive communication from the first type communication path (50) to a second type communication path (10) if the quality of transmission is not acceptable; regarding claim 2, wherein said step of switching comprises switching said time sensitive communication from an Internet network (50) (50) to a circuit switched telephone network (10) (10); regarding claim 3, wherein said time sensitive communication includes audio data; regarding claim 4, wherein said time sensitive communication is a telephone call; regarding claim 5, wherein said time sensitive communication is a video communication; regarding claim 6, the step of switching an in-progress time sensitive communication from the second type communication path (10) to the first type communication path (50) if the quality of transmission over the first type communication path (50) is acceptable; regarding claim 7, wherein said first type communication path (50) is a internet protocol network (50) and said second type communication path (10) is a circuit-switched network (10); regarding claim 8, determining the importance of a plurality of time sensitive communications and prioritizing switching of the time sensitive communication from the first type communication path (50) to the second type communication path (10) based on the determined importance of the time sensitive communication, see column 5, lines 16-45; regarding claim 12, wherein said step of evaluating comprises evaluating the transmission of data

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packets across the first type transmission path (50) to determine if the quality of transmission is acceptable; regarding claim 13, wherein data packet delay is evaluated; regarding claim 14, wherein data packet loss is evaluated; see column 5, lines 16-45; regarding claim 18, evaluating whether the quality of data transmission over a first type communication path (50) is acceptable; and switching an in-progress time sensitive communication from a second type communication path (10) to the first type communication path (50) if the quality of transmission over the first type communication path (50) is acceptable; regarding claim 19, wherein said first type communication path (50) is a packet network and said second type communication path (10) is a circuit-switched network; regarding claim 20, wherein said packet network is an Internet protocol network; regarding claim 21, wherein the first and second type network are packet networks; regarding claim 22, wherein said time sensitive communication includes voice data; regarding claim 23, wherein said time sensitive communication is a telephone call; regarding claim 24, wherein said step of evaluating comprises evaluating the transmission of data packets across the first type communication path (50) to determine if the quality of transmission is acceptable; regarding claim 25, wherein data packet delay is evaluated; regarding claim 26, wherein data packet loss is evaluated; regarding claim 27, a computer readable medium, used in evaluating data communication routing paths for use in routing time sensitive communications over the paths, including instructions which when executed by a computer system, perform the steps of: evaluating whether the quality of data transmission over a first type communication path (50) is acceptable; and switching an in-progress time sensitive communication from the first type communication path (50) to a second type communication path (10) if the quality of data transmission is not acceptable; regarding claim 28, wherein said step of switching comprises

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switching said time sensitive communication from an Internet network (50) to a circuit switched telephone network (10); regarding claim 29, a computer readable medium, used in evaluating data communication routing paths for use in routing time sensitive communications over the paths, including instructions which when executed by a computer system, perform the steps of: evaluating whether the quality of data transmission over a first type communication path (50) is acceptable; and switching an in-progress time sensitive communication from a second type communication path (10) to the first type communication path (50) if the quality of transmission over the first type communication path (50) is acceptable; regarding claim 30, wherein said time sensitive communication is switched from a circuit switched network to an Internet protocol network; regarding claim 31, a computer implemented method of evaluating data communication routing paths for use in routing time sensitive communications over the paths, comprising the steps of evaluating the quality of data transmission over a first type communication path (50); and switching an in-progress time sensitive communication back and forth between the first type communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); regarding claim 32, wherein said step of switching comprises switching said time sensitive communication back and forth between an Internet network (50) and a circuit switched telephone network (10); regarding claim 33, wherein the quality of transmission of the Internet network (50) is evaluated for an acceptable quality for voice transmission; regarding claim 34, transmitting voice communication over the Internet network (50) when the quality of data transmission is acceptable, and transmitting the voice communication over the circuit switched network when the quality of transmission is not acceptable; regarding claim 35, determining whether the quality of telephone call transmissions

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along a first type telephone call transmission path (50) meets preselected criteria; and automatically switching an existing telephone call from a second type telephone call transmission path to the first type telephone call transmission path (50) when the quality of service along the first type telephone' call transmission path meets the preselected criteria; regarding claim 36, wherein said switching step comprises switching voice data transmitted along the second type telephone call path to the first type telephone call path when the quality of service meets said preselected criteria; regarding claim 37, wherein said determining step comprises sending test data packets along said first type telephone call path to determine the quality of service along the first type telephone call transmission path (50) ; regarding claim 38, wherein said determining step comprises measuring data packet delay along said first type telephone call transmission path (50) ; regarding claim 39, wherein said determining step comprises measuring data packet loss along said first type telephone call transmission path (50) ; regarding claim 40, wherein said determining step comprises measuring data packet loss along said first type telephone call transmission path (50) ; regarding claim 41, wherein said switching step comprises switching said existing telephone call from a circuit switched telephone call path to an internet protocol telephone call path; regarding claim 42, further comprising the step of switching a telephone call that has been switched from said second type telephone call transmission path to said first type telephone call transmission path (50) back to said second type telephone transmission call path (10) when the quality of service along said first telephone call transmission path does not meet predetermined criteria; regarding claim 43, wherein said first telephone call path is an Internet Protocol path and wherein said second type telephone call transmission path is a circuit switched telephone call path; regarding claim 44, further

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comprising determining the number of telephone call lines available for switching telephone calls from said first type telephone call transmission path (50) to said second type telephone path and switching only said number of calls from said first type telephone transmission call path to said second type telephone call transmission path; regarding claim 48, determining whether the quality of telephone call transmissions along a first type telephone call transmission path (50) meets preselected criteria; and automatically switching an existing telephone call from the first telephone call transmission path to a second telephone call transmission path when the quality of service along the first type telephone call transmission path (50) does not meet the preselected criteria; regarding claim 49, a processor operative to determine whether a voice communication occurring between a first location and a second location should be switched to either a first type of voice communication path or a second type communication path (10) based on predetermined threshold values for the voice communication; and a switch for switching the voice communication to either the first or second type voice communication path based on the predetermined threshold values; regarding claim 50, wherein said processor is operative to initiate switching said voice communication from said first type communication path (50) to said second type communication path (10) and wherein said processor is operative to initiate switching said voice communication from said second type communication path (10) to said first type communication path (50); regarding claim 51, wherein said first type communication path (50) is an internet protocol based network and said second type communication path (10) is a circuit switched communication path; regarding claim 52, a processing unit that evaluates the quality of data transmission over a first type communication path (50); and switch that switches an in-progress time sensitive communication back and forth between the first type

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communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); regarding claim 53, wherein said switch switches said time sensitive communication back and forth between an Internet network (50) and a circuit switched telephone network (10); regarding claim 54, wherein the evaluator unit evaluates the quality of transmission of the Internet network (50) for an acceptable quality for voice transmission; regarding claim 55, wherein the switch transmits voice communication over the Internet network (50) when the quality of data transmission is acceptable, and transmits the voice communication over the circuit switched network when the quality of transmission is not acceptable; regarding claim 56, wherein the first and second type networks are packet networks; regarding claim 61, means for evaluating the quality of data transmission over a first type communication path (50); and means for switching an in-progress time sensitive communication back and forth between the first type communication path (50) and a second type communication path (10) based on the quality of service of the first type communication path (50); regarding claim 62, wherein said means for switching comprises switching said time sensitive communication back and forth between an Internet network (50) and a circuit switched telephone network (10); regarding claim 63, means for evaluating whether the quality of data transmission over a first type communication path (50) is acceptable; and means for switching an in-progress time sensitive communication from the first type communication path (50) to a second type communication path (10) if the quality of transmission is not acceptable; regarding claim 64, wherein said step of switching comprises switching said time sensitive communication from an Internet network (50) to a circuit switched telephone network (10); regarding claim 65, means for evaluating whether the quality of data transmission over a first type communication

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path (50) is acceptable; and means for switching an in-progress time sensitive communication from a second type communication path (10) to the first type communication path (50) if the quality of transmission over the first type communication path (50) is acceptable; regarding claim 66, wherein said step of switching comprises switching said time sensitive communication from an Internet network (50) to a circuit switched telephone network (10). See Abstract, and column 6-14.

Farris does not disclose the following features: regarding claim 1, determining the importance of a plurality of time sensitive communications; and switching an in-progress time sensitive communication from the first type communication path to a second type communication path based on the determined importance of the time sensitive communication if the quality of transmission is not acceptable; regarding claim 18, identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and switching a one of the identified in-progress time sensitive communications from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable; regarding claim 27, determining the importance of a plurality of time sensitive communications: and switching an in-progress time sensitive communication from the first type communication path to a second type communication path based on the determined importance of the time sensitive communication if the quality of transmission is not acceptable; regarding claim 29, identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and switching a one of the identified in-progress time sensitive communications from a second type communication path to the first

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type communication path if the quality of transmission over the first type communication path is acceptable; regarding claim 31, determining the importance of a plurality of time sensitive communications; and switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path and on the determined importance of the time sensitive communication; regarding claim 35, identifying existing telephone calls that can be switched from a second type communication path to the first type communication path; regarding claim 48, determining the importance of a plurality of telephone call transmissions, and automatically switching an existing telephone call from the first telephone call transmission path to a second telephone call transmission path based on the determined importance of the telephone call transmissions when the quality of service along the first type telephone call transmission path does not meet the preselected criteria; regarding claim 49; a processor operative to determine whether a voice communication occurring between a first location and a second location should be switched to either a first type of voice communication path or a second type communication path based on the importance of the voice communication; regarding claim 52, determines the importance of an in-progress time sensitive communication; a switch that switches the art in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the importance of the time sensitive communication; regarding claim 61, means for determining the importance of a plurality of in-progress time sensitive communications; and means for switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the importance of the in-progress time sensitive

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communication; regarding claim 63, means for determining the importance of a plurality of in-progress time sensitive communications; and means for switching an in-progress time sensitive communication from the first type communication path to a second type communication path if the quality of transmission is not acceptable based on the importance of the in-progress time sensitive communication; regarding claim 65, means for identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and means for switching a one of the identified in-progress time sensitive communications from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable.

Forslow discloses a communication system comprising the following features: regarding claim 1, determining the importance of a plurality of time sensitive communications; and switching an in-progress time sensitive communication from the first type communication path to a second type communication path based on the determined importance of the time sensitive communication if the quality of transmission is not acceptable; regarding claim 18, identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and switching a one of the identified in-progress time sensitive communications from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable; regarding claim 27, determining the importance of a plurality of time sensitive communications: and switching an in-progress time sensitive communication from the first type communication path to a second type communication path based on the determined importance

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of the time sensitive communication if the quality of transmission is not acceptable; regarding claim 29, identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and switching a one of the identified in-progress time sensitive communications from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable; regarding claim 31, determining the importance of a plurality of time sensitive communications; and switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path and on the determined importance of the time sensitive communication; regarding claim 35, identifying existing telephone calls that can be switched from a second type communication path to the first type communication path; regarding claim 48, determining the importance of a plurality of telephone call transmissions, and automatically switching an existing telephone call from the first telephone call transmission path to a second telephone call transmission path based on the determined importance of the telephone call transmissions when the quality of service along the first type telephone call transmission path does not meet the preselected criteria; regarding claim 49; a processor operative to determine whether a voice communication occurring between a first location and a second location should be switched to either a first type of voice communication path or a second type communication path based on the importance of the voice communication; regarding claim 52, determines the importance of an in-progress time sensitive communication; a switch that switches the art in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the importance of

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the time sensitive communication; regarding claim 61, means for determining the importance of a plurality of in-progress time sensitive communications; and means for switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the importance of the in-progress time sensitive communication; regarding claim 63, means for determining the importance of a plurality of in-progress time sensitive communications; and means for switching an in-progress time sensitive communication from the first type communication path to a second type communication path if the quality of transmission is not acceptable based on the importance of the in-progress time sensitive communication; regarding claim 65, means for identifying in-progress time sensitive communications that can be switched from a second type communication path to the first type communication path; and means for switching a one of the identified in-progress time sensitive communications from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable. See column 5, lines 10-21; column 6, lines 16-33; column 23, lines 10-24. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Farris, by using the features, as taught by Forslow, in order to provide better service for different types of applications. See Forslow, column 7, lines 38-52.

6. Claims 9-11, 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris (US 6,064,653) in view of Forslow (US 6,608,832) as applied to claims 1, 35, 42, 44 above, and further in view of Dutnall (US 6,584,098).

Farris and Forslow disclose the claimed limitations above. Farris and Forslow do not disclose the following features: regarding claim 9, wherein said step of switching comprises

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switching time sensitive communications determined to be more important to the second type communication path (10) before less important time sensitive communications are switched; regarding claim 10, reserving a certain amount of communication conduits of the second type communication path (10) for selected higher importance time sensitive communications; regarding claim 11, wherein said time sensitive communications are telephone calls; regarding claim 45, prioritizing switching of telephone calls from said second type telephone call transmission path to said first type telephone call transmission path (50) based on call switching criteria; regarding claim 46, wherein said call switching criteria is based a telephone number associated with the calling or called party telephone line; regarding claim 47, wherein certain telephone numbers are designated as higher priority telephone numbers for use in prioritizing said switching.

Dutnall discloses a telecommunication system comprising the following features: regarding claim 9, wherein said step of switching comprises switching time sensitive communications determined to be more important to the second type communication path (10) before less important time sensitive communications are switched; regarding claim 10, reserving a certain amount of communication conduits of the second type communication path (10) for selected higher importance time sensitive communications; regarding claim 11, wherein said time sensitive communications are telephone calls; regarding claim 45, prioritizing switching of telephone calls from said second type telephone call transmission path to said first type telephone call transmission path (50) based on call switching criteria; regarding claim 46, wherein said call switching criteria is based a telephone number associated with the calling or called party telephone line; regarding claim 47, wherein certain telephone numbers are designated as higher

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priority telephone numbers for use in prioritizing said switching, see Abstract, and column 3, line 23-49, and column 12, line 37 to column 14, line 49. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Farris and Forslow by using the features, as taught by Dutnall, in order to provide better quality communications. See Dutnall, column 3, line 13-57.

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris (US 6,064,653) in view of Forslow (US 6,608,832) as applied to claim 1 above, and further in view of Naudus (US 6,412,006).

Farris and Forslow disclose the claimed limitations above. Farris and Forslow do not disclose the following features: regarding claim 15, wherein the first and second type communication paths are packet networks; regarding claim 16, wherein the second type network is an ATM network; regarding claim 17, wherein the first type network is an ATM network.

Naudus discloses a communication system comprising the following features: regarding claim 15, depicted in Fig. 1, wherein the first (24) and second (20) type communication paths are packet networks; regarding claim 16, wherein the second (20) type network is an ATM network; regarding claim 17, wherein the first (24) type network is an ATM network. See column 5, lines 5-22. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Farris and Forslow by using the features, as taught by Naudus, in order to provide a high quality of service. See Naudus, column 5, lines 26-28.

Conclusion

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 703-308-7583. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER

Kwang B. Yao
June 8, 2004